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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,304	09/05/2006	Anthony J. Khouri	061300-0906	3384

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EXAMINER
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SOOHOO, TONY GLEN

ART UNIT	PAPER NUMBER
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1797

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/568,304	<b>Applicant(s)</b> KHOURI, ANTHONY J.	
	<b>Examiner</b> Tony G. Soohoo	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 81-88 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 81-88 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Parent claim 1 positively establishes two distinct power sources. "a first power source" and "a second power source". However claim 3 states that "the first power source and the second power source is the same" which *negates* the positive establishment of a "second power source" in claim 1, and does not further limit the subject matter of previously established "second power source"

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-27, 81-88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 introduces two discrete elements of a "first power source" and a "second power source". The positive number of power sources can not be determined

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since, dependent claim 3 states “the first power source and the second power source are the same power source”. If claim 3 is true, then this contradicts the claim 1 statement that there are two power sources, and claim 1 is to be read as having only one power source. Thus in light of claim 3, the scope of claim 1 can not be determined as to the number of power source(s) being provided in the claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11, 13--23, 81-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudelmaier 4585356 in view of WO 01/26871 A1 (KHOURI) published 19 Apr 2001 (family of US 6,902,331).

The Hudelmaier reference teaches that a cement mixer may include a drum 2, a frame with wheels 6, a first power source 3, and a second power source 3, which is the same power source (see instant dependent claim 3) coupled to respective 1st and 2nd drive transmissions which may be coupled to drive the truck wheels, or to rotate the drum.

The Hudelmaier reference however is silent as to the particulars of the structure inside the drum for mixing.

The KHOURI, WIPO document WO 01/26871 (referred to as WO '871) discloses a mixer drum may have a spiral fin body (generally figure 18g, 84) , support member and a spacer 71 (polyurethane) disposed proximate of the support member (70, 105, glass fibre reinforce elastomer). The support member is partially encapsulated by the body as seen in (the portion 65 next to the spacer 71 (fig 18g, 21).

In view of the teaching of the WO '871 reference of a spiral fin construction in a mixing drum, in light of the knowledge gleaned by the prior art, it would have been obvious to a person having ordinary skill in the art to provide a spiral composite fin of the constructional configuration as taught by WO '871 inside the drum to enhance mixing.

Regarding claims 2-9, 13-15, 21, 81-83, further note: That the fin is fixed to the wall, it is integral to the drum wall as a single unitary body; the 1<sup>st</sup> power source and 2<sup>nd</sup> power source is the same engine; the fin formation includes a base (at the wall of the drum with a taper, see fig 21) an intermediate region, and an end region; the support member is embedded within the end region (see fig 21), the spacer and support member has resilience in material characterize thereby resiliently engages each other, the spacer extends from the support member to the exterior of the body (see left side of the fin in figure 21) and is torsionally flexible, the spacer substantially surrounds the underside and along its complete length of the support member, one may define a measurement and measure an inside diameter and outside diameter of the spacer when measured

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from the center of the drum to the spacer element in the fin), the formation is a mixing fin blade for a drum, and extends around the inner surface of the drum wall in a spiral; the wall has an inner layer (where the fin attaches bonding layer, and internal wear layer) and an outer layer (outside of the drum) formed as a unitary body.

Regarding claim 10, the issues to the material being such that "the first material flows around ... when [it] is in an cured state" are related to a method of construction and is structurally immaterial to the layer of material in final apparatus claims.

Regarding claim 11, it is known to provide holes, pits, or grooves, so that two layers of material may adhere to one another when being bonded, it would have been obvious to provide an aperture through the spacer so that it may better adhere to the body and support during construction.

Regarding claim 16-19, composite material with carbon or graphite fibers embedded in urethane resin is known. It provides strength and wear resistance. With common knowledge of such characteristic, it would have been obvious to provide substitute the glass fibre composite material in the support with a support composite material of carbon or graphite embed in urethane . It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 20, absent any empirical evidence an extraordinary, unexpected result of the shape of the support, it would have been obvious to a person having ordinary skill in the art to alter the shape of the support to a circular cross section so that it provide additional strength by providing a structure without surface edge discontinuities, whereas it is nothing more than one of a finite regular shape configuration which may be configured in order to provide a more advantageous system since it has been held that, absent any unexpected result, a mere change in form or shape on the basis of suitability is a matter of obvious mechanical design choice. In re Dailey, 149 USPQ 47 (CCPA 1976).

Regarding claim 22-23, note that the drum wall and the rap taper of the body provides a seam which the ramp extends therefrom (see fig 21).

Regarding claims 87-88 as to the size, height and width of the base region, it would have been an obvious matter of design choice to change the width and height to respectively size and five inches to produce a more stronger and sufficiently large base to hold the fin, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Regarding the inner and outer layers materials, plastic elastomer material is a known abrasion resistant liner and drums made of fiber reinforce materials are notoriously well known. It would have been obvious to one having ordinary

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skill in the art at the time the invention was made to provide a further inner elastomeric abrasion resistance liner material inside the drum and make the outer drum with a light weight fiber reinforced drum so provide abrasion resistance from materials mixed inside the drum and to provide a light weight drum during to use less energy in the rotation of the drum, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hudelmaier 4585356 in view of WO 01/26871 A1 (KHOURI) published 19 Apr 2001 (family of US 6,902,331) and in further view of Suganuma 4124304.

Hudelmaier 4585356 in view of WO 01/26871 A1 (KHOURI) published 19 Apr 2001 (family of US 6,902,331) discloses all of the recited subject matter as established above with regards to parent claim 1, however is silent to the recitation of a drive ring coupled to the drum wall for the rotation of the drum (instant claim 24). The reference to Suganuma teaches a drive transmission 19 which is coupled by the use of a drive ring 8, 20. It would have been obvious to one of ordinary skill in the art to provide for the transmission coupling to the drum of the Hudelmaier's cement mixer truck with a drive ring such as taught by Suganuma so that the drum may be more effectively aligned and coupled for drum rotation.



8. Claim 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudelmaier 4585356 in view of WO 01/26871 A1 (KHOURI) published 19 Apr 2001 (family of US 6,902,331) and in further view of Ball 2303902.

Hudelmaier 4585356 in view of WO 01/26871 A1 (KHOURI) published 19 Apr 2001 (family of US 6,902,331) discloses all of the recited subject matter as established above with regards to parent claim 1, however is silent to the recitation of a hatch on a drum opening . The Ball reference teaches that a cement mixer drum 11 may have a hatch opening 14 with a hatch over 14 engaging the opening. As seen in figure 1, there is a 1st panel and 2nd panel which the 1st and 2nd panel is coupled together, see fig 1, cut away. It would have been obvious to provide for the drum of Hudelmaier with a hatch made of connected panels so as to sit into an aperture in the drum so that it may provide an alternate manner to fill the drum.

#### ***Allowable Subject Matter***

9. Claim 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ball 1983891, and 1781965, Lendved 3080152, discloses hatches on a mixer drum.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 8AM-5PM, Tues-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tony G Soohoo/  
Primary Examiner, Art Unit 1797

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Primary Examiner  
Art Unit 1797